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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,006

08/28/2006

Katsuyuki Torii

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EXAMINER

BELOUSOV, ALEXANDER

ART UNIT

PAPER NUMBER

2894

MAIL DATE

DELIVERY MODE

03/17/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/591,006	TORII, KATSUYUKI	
	Examiner	Art Unit	
	ALEXANDER BELOUSOV	2894	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 7-11 is/are pending in the application.
- 4a) Of the above claim(s) 7-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the amendment filed on 10/23/2009. Currently, claims 1-4 have been examined.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claim(s) 1-4** are rejected under 35 U.S.C. 102(b) as being anticipated by (JP-2004-228553) by Torii et al (“Torii”).

Regarding claim 1, Torii discloses in FIG. 2 and related text (official translation is included with this action), **e.g.**, a semiconductor device, comprising:

a semiconductor base (11-14) comprising a plurality of first semiconductor regions (11; “region” is an arbitrary part of the whole; so, in a FIG. 2, the left half of 11, shall be the first of the first regions and the right half of 11, shall be the second of the first regions) having a first conductivity type, a plurality of second semiconductor regions (13) having a second conductivity type formed in a specific surface portion of said first semiconductor regions (it is *specific*, because it is formed only in a specific part of the first semiconductor region), and a plurality of third semiconductor regions (14) having the first conductivity type formed in a specific surface portion of said second semiconductor regions (it is *specific*, because it is formed only in a specific part of the second semiconductor region); and

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a first electrode (31) formed directly above a surface region of said second semiconductor region that is between said first semiconductor region and said third semiconductor regions (it is directly above such portion of 13, which is between 11 and 14),

wherein: a first region (see FIG. 1(b); it shows 24 different 14 regions; the "first region" is the *inner* 4 in the second and third rows), in which one of said third semiconductor regions exhibiting a first surface area (see FIG. 1(b); specifically, it is a second 14 from the left, in the second row; it is one of the *smaller* 14's), is formed at a center of said semiconductor base, and

a second region (the "second region" is the bottom row of 14's, the top row of 14's and the *outer* ones in the second and third rows), in which another of said third semiconductor regions (see FIG. 1(b); specifically, it is a first 14 from the right, in the bottom row; it is one of the *larger* 14's) exhibits a second surface area larger than said first surface area, is formed at a circumference of said semiconductor base so as to enclose said first region (the outer surround the inner, thus meeting the limitations of the claim).

Regarding claim 2, Torii discloses in FIG. 2 and related text, **e.g.**, there are a plurality of said third semiconductor region (14), which are formed to be spaced from each other.

Regarding claim 3, Torii discloses in FIG. 2 and related text, **e.g.**, said second plurality of semiconductor regions are (13) is formed in a belt shape (see FIG. 1(b)).

Regarding claim 4, Torii discloses in FIG. 2 and related text, **e.g.**, wherein said second semiconductor region (13), are formed side by side with a space therebetween (see FIG. 1(b)).

Response to Arguments

1. Applicant's arguments have been fully considered but they are not persuasive.

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2. **Regarding claim 1**, the Applicant argues on page 7-8 of his Remarks that the new wording now sufficiently distinguishes from the Torii Publication (used in the above rejection).

First of all the Examiner would like to thank the Applicant for the changes that dealt with 112 2nd rejections previously present. However, as far as prior art rejections, the Examiner has carefully went over the claims and the art and is not sure why the Applicant thinks that the claim now distinguishes from the prior art. The Examiner has added additional comments in his above rejection to better explain the rejection (which is very similar to what was previously in the rejection). If the Applicant still has questions, then the Applicant is strongly encouraged to call the Examiner. This Examiner is very open to the spur-of-the-moment, unscheduled interviews.

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Belousov whose telephone number is 571-270-3209.

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The examiner can normally be reached on Monday - Thursday 7:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Nguyen can be reached on 571-272-2402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alexander Belousov/
Examiner, Art Unit 2894
03/10/2010

/Bradley K Smith/
Primary Examiner, Art Unit 2894